



# Collaboration

Technology and Market Dynamics

**DARPA June 1997**



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**Director,**

**Collaborative and Intranet  
Computing**

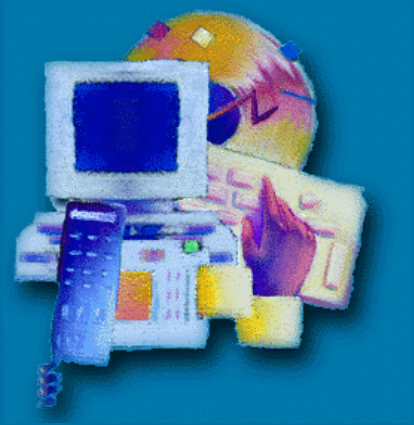


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# Topics

- What is Groupware?
- Intranet Effect
- Market Vendors and Dynamics
- Groupware Future



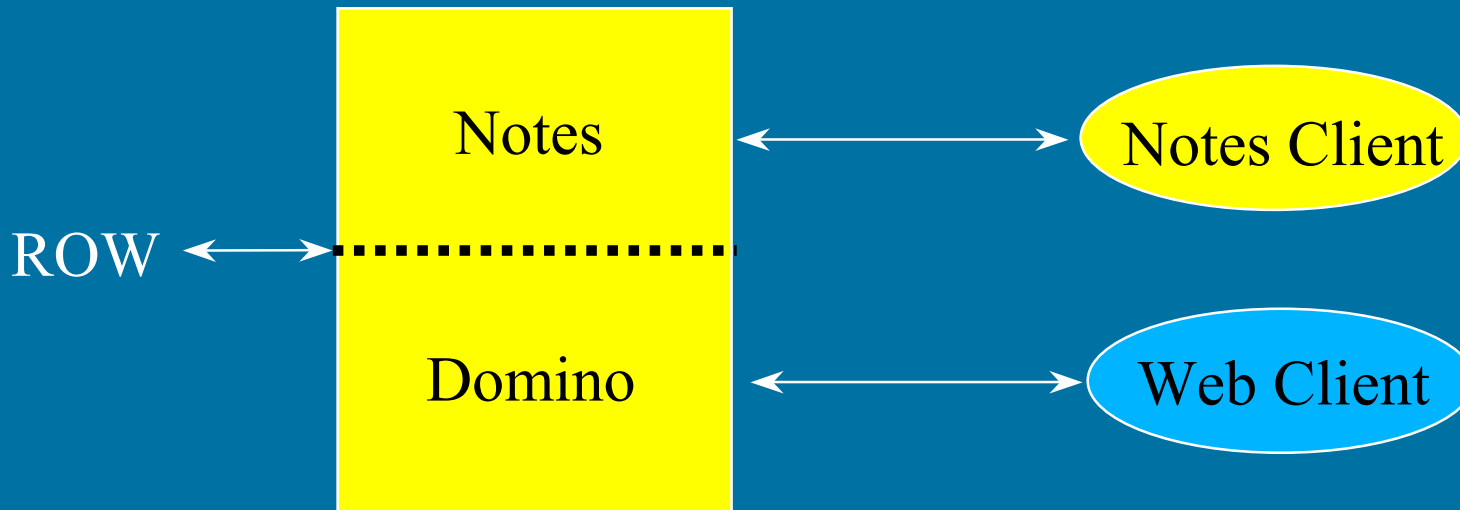
*Groupware has been around for 8 years.*

*What is it?*



# Groupware - The Lotus View

Collaboration, communication, coordination

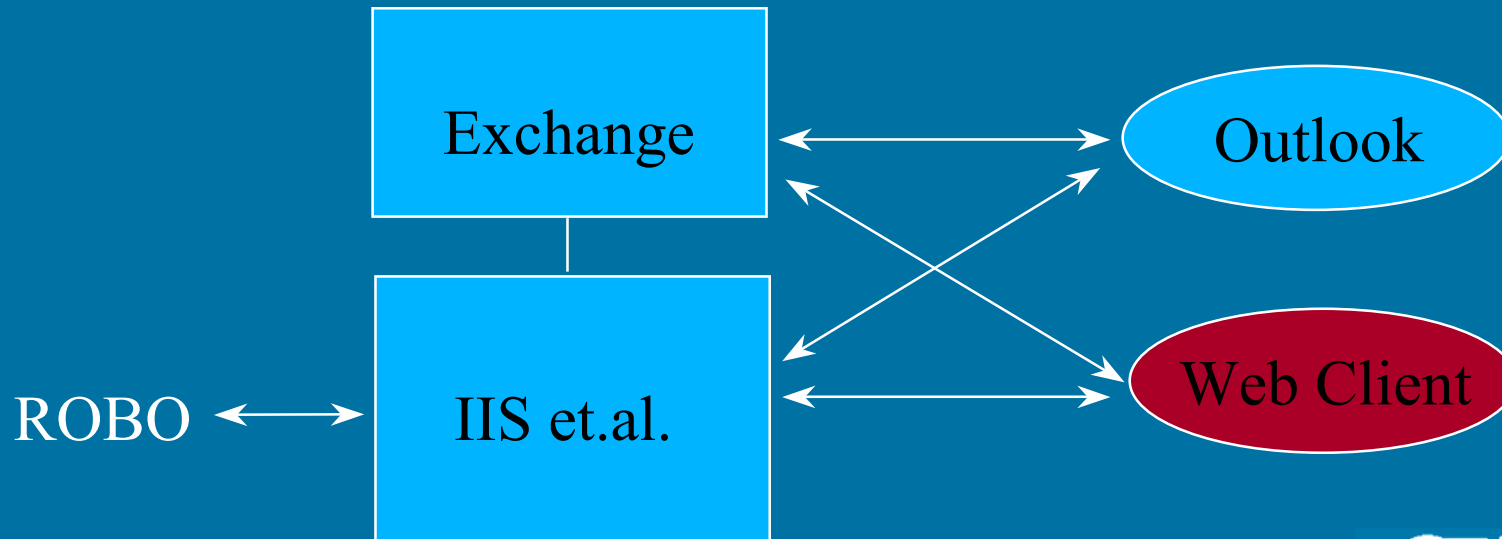




# Groupware - The Microsoft View

## Advanced messaging -

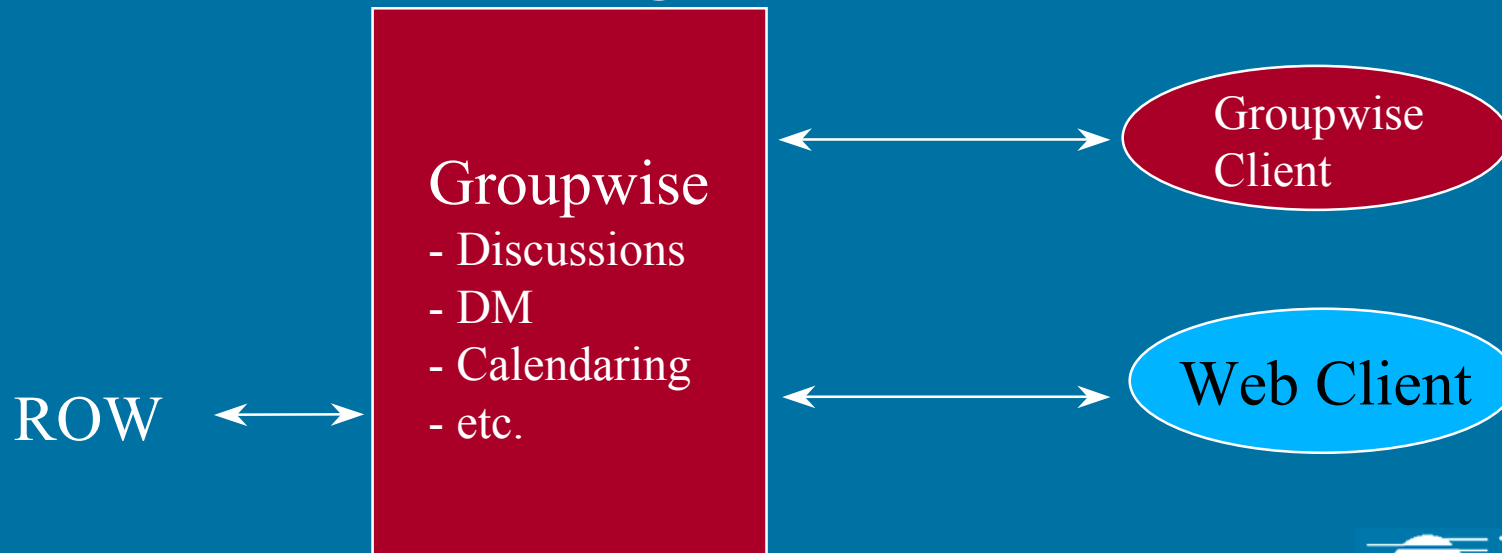
As long as it is part of Back Office; runs on NT; is integrated with IIS, SMS, SQL Server; and you pay us.





# Groupware - The Novell View

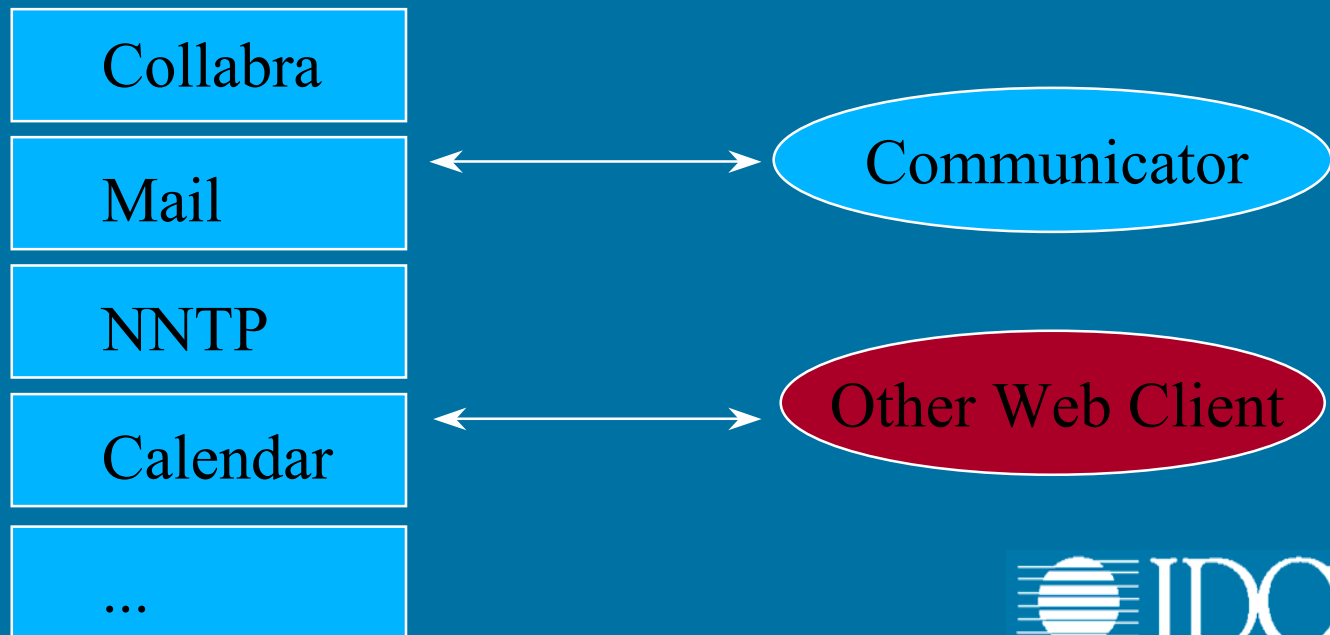
**Threaded discussions, document management,  
workflow, searching, calendaring and scheduling, information sharing, etc.**





# Groupware - The Netscape View

What we sell (and we're open)





# IDC's Definition of Groupware

- The technology and human processes needed to create a collaborative work environment.
- Three components of groupware:
  - Collaboration
  - Workflow
  - Knowledge Base

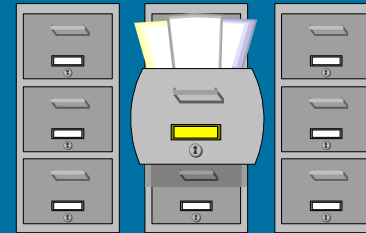




# Three Components of Work

## Knowledge Base

Ad-hoc and Structured  
Stores of Information



*TASK!*

*TASK!*

## Workflow

Administrative and  
Mission Critical

## Collaboration

Ad-hoc and formal

- E-mail
- Discussion Databases
- White-board Technology



# Applying the Three Components

Workers use groupware to different degrees depending on their job requirements:

	Collaboration	Workflow	Knowledge Base
Accounting	10%	50%	40%
Sales Force	85%	10%	5%
Marketing	55%	15%	30%



# Traditional Groupware

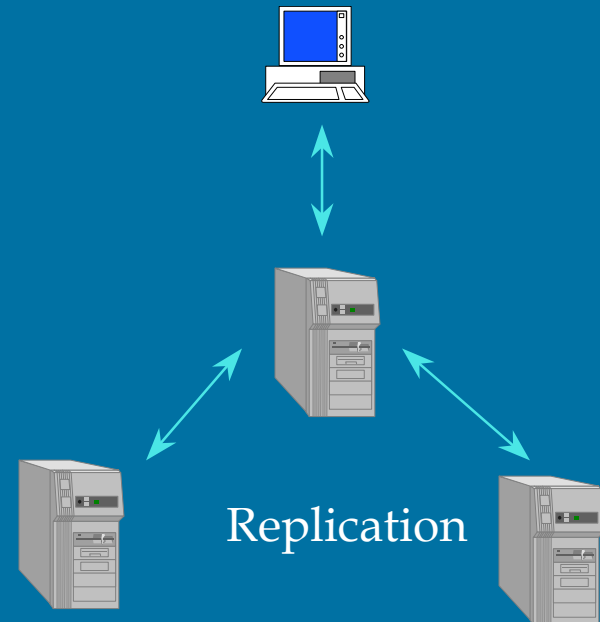
- Lotus Notes
- IBM OfficeVision
- Microsoft Exchange
- Novell Groupwise
- ICL TeamWare
- Mesa Conference+
- Oracle InterOffice



# Network Based Groupware

- LAN based
- Replication
- High administration
- Secure
- Reliable
- Cost-to-use (1:5)

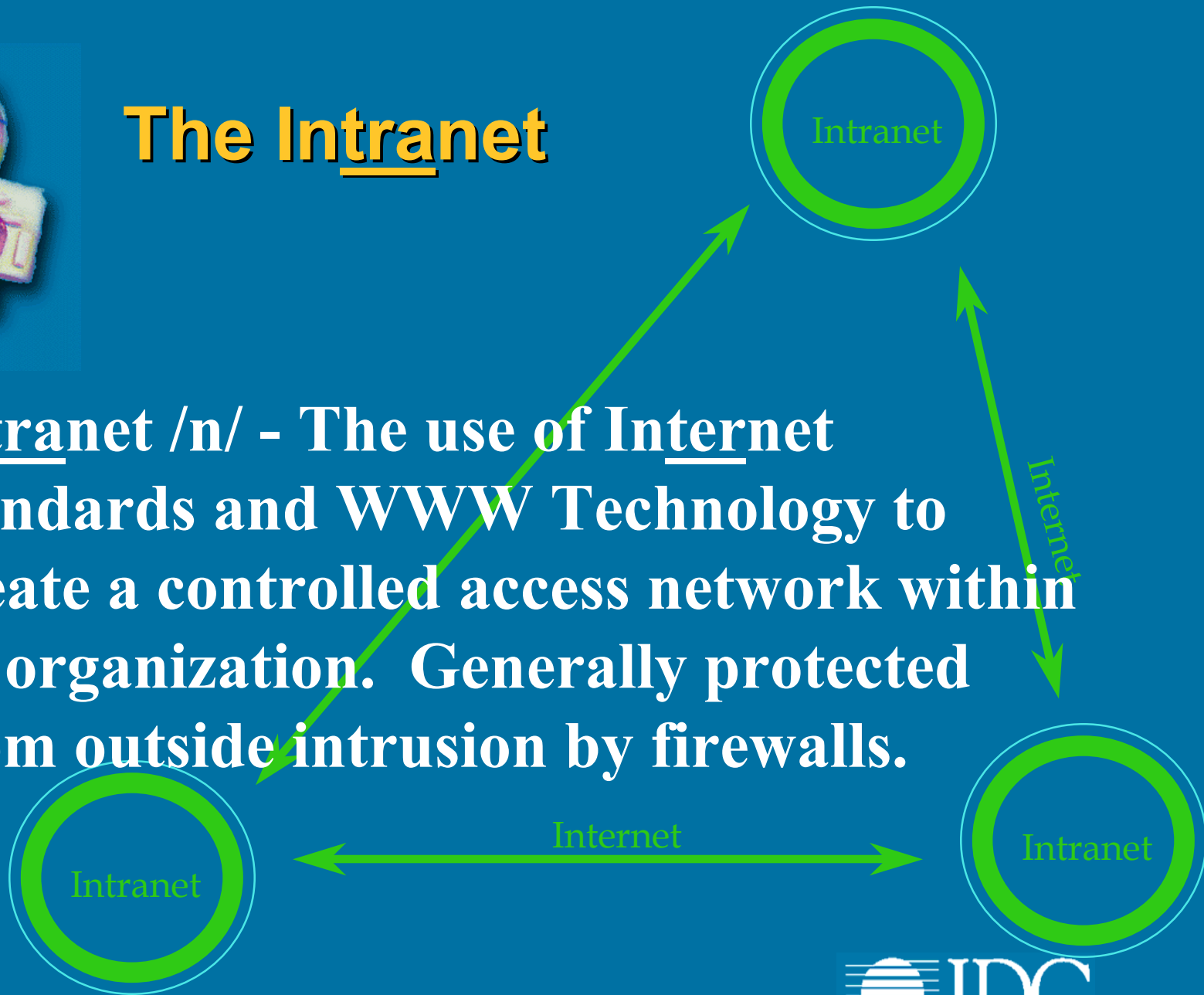
## *Network Centric*





# The Intranet

- Intranet /n/ - The use of Internet standards and WWW Technology to create a controlled access network within an organization. Generally protected from outside intrusion by firewalls.

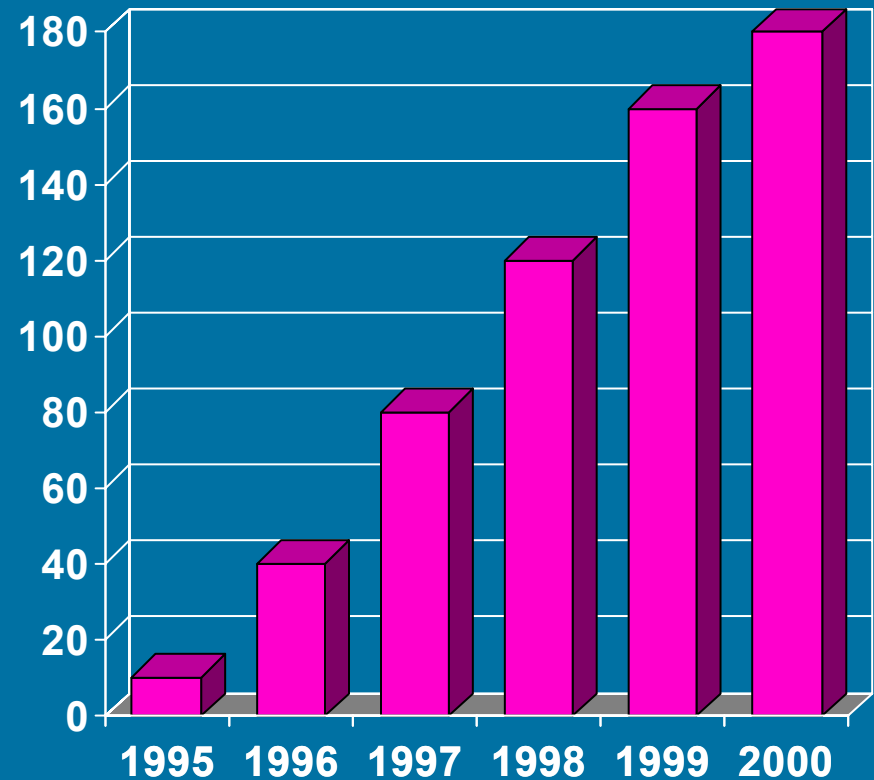




# Web Browsers 1995 - 2000

- Worldwide Web browser use will grow from 10 million to over 180 million by the year 2000.

Users



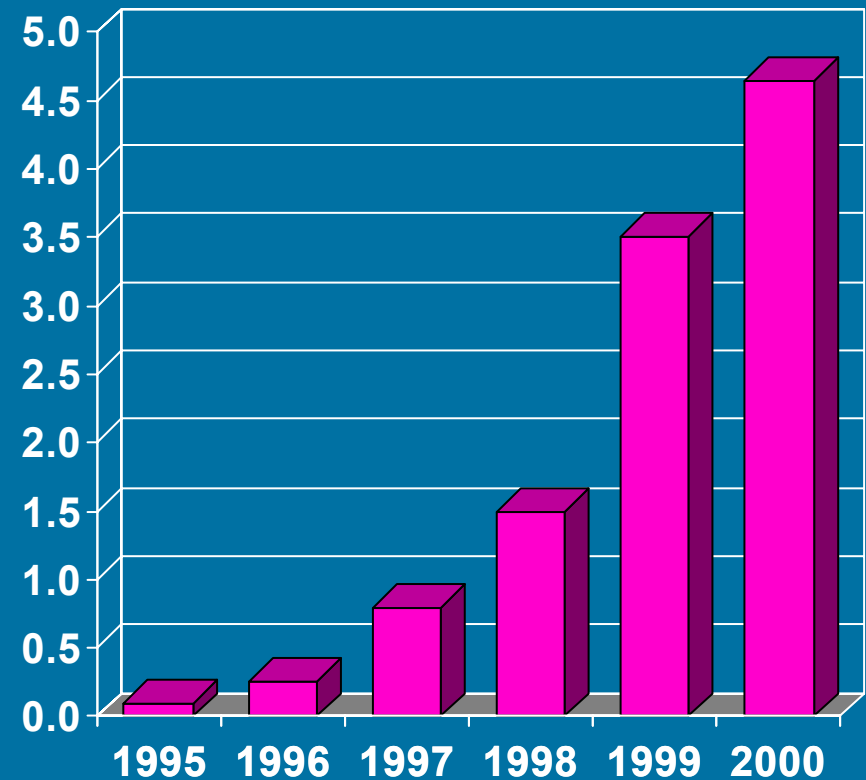
Source: IDC, December 1995



# Intranet Web Servers 1995 - 2000

- Worldwide Intranet focused Web servers will grow from 100,000 to over 4.7 million by the year 2000.

Units



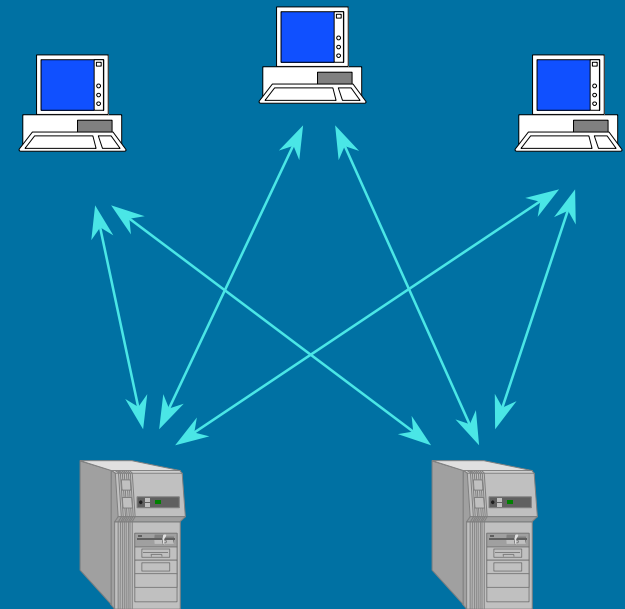
Source: IDC, December 1995



# Intranet Foundation to Groupware

- Web based
- Limited replication
- Moderate administration
- Secure
  - Intranet - Yes
  - Internet - Yes/No
- Network dependent

## *Intranet Centric*







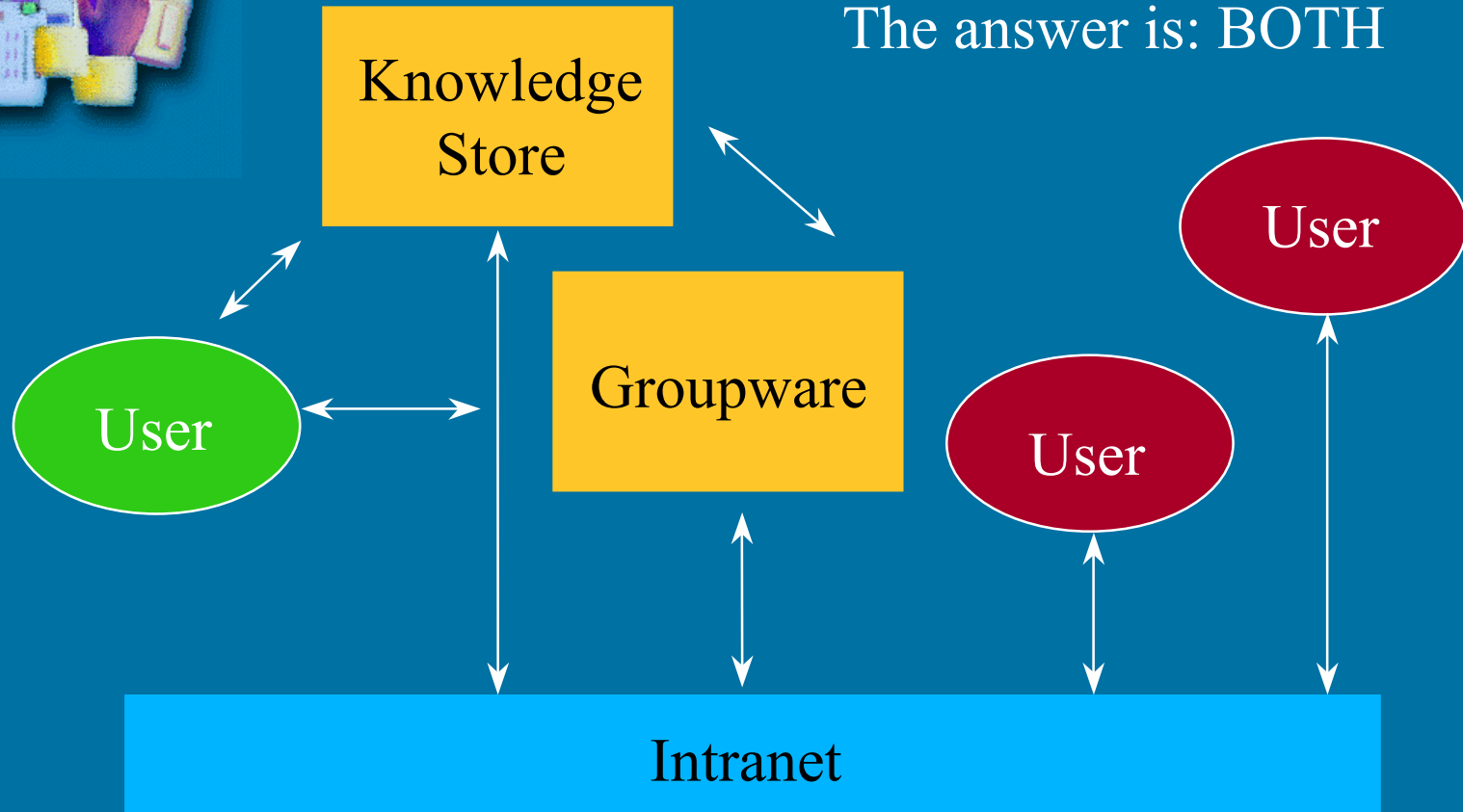
# Intranet Groupware

- Netscape Collabra
- Open Text Livelink Intranet
- Radnet Webshare
- IntraActive
- Many others in development...



# Intranet and Groupware

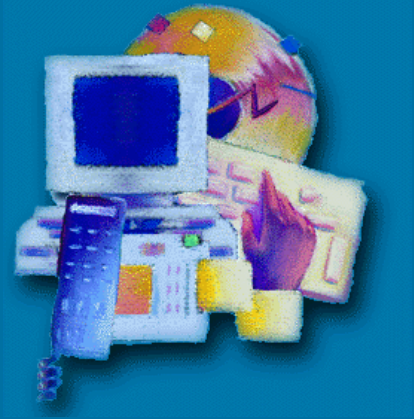
The answer is: BOTH





## Key Technology Points:

- Use the three component view of groupware
- Match the tool to the use
- The Intranet is a foundation for a groupware application -- it is not groupware.
- *All groupware will be intranet enabled*



# *The Groupware Vendors and Market*



# Collaborative Application Market

- **Integrated Collaborative Applications**
  - Information Sharing
  - Electronic Conferencing
- **Document Management**
- **Workflow**
- **Group Calendaring and Scheduling**



# Groupware Use

e-mail

*Knowledge Management*  
*Workflow*

*Information Sharing*

*Collaboration*

*Static Publishing*

User Base

→ Human Factors



# Integrated Collaborative Environments

	Technology Leading	Open	Company Strategy	
*Lotus/IBM	A	A	A	- Market leader
*Netscape	A-	A	A	- The internet experts
*Open Text	A	A	A	- Leading EDM/WF
Novell	B	A-	B-	- Struggling (*Novonix?)
*Microsoft	B+	B	A-	- Still clarifying message/position
SoftArc	B+	A	B	- Second tier - messaging focus
ICL TeamWare	B	B	B	- Good product outside US
Uniplex	B	B	B+	- May be interesting in future
Oracle Office	B	B	B	- Lack of sales limits future
Digital	C	C	C	- Mainframe solution OK - but
*Radnet	A	A	A	- Very interesting dev. env.

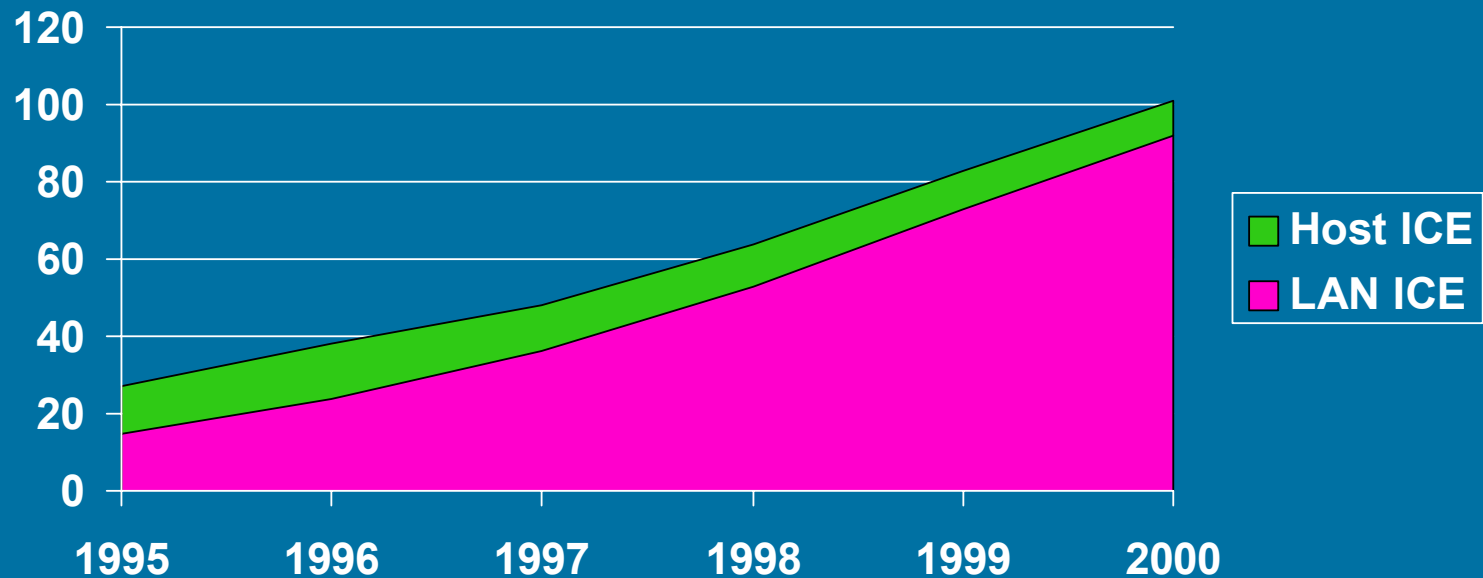
\* potential expert panel partner





# User Growth

Total ICE Installed Base of Users 1995 - 2000 (M)

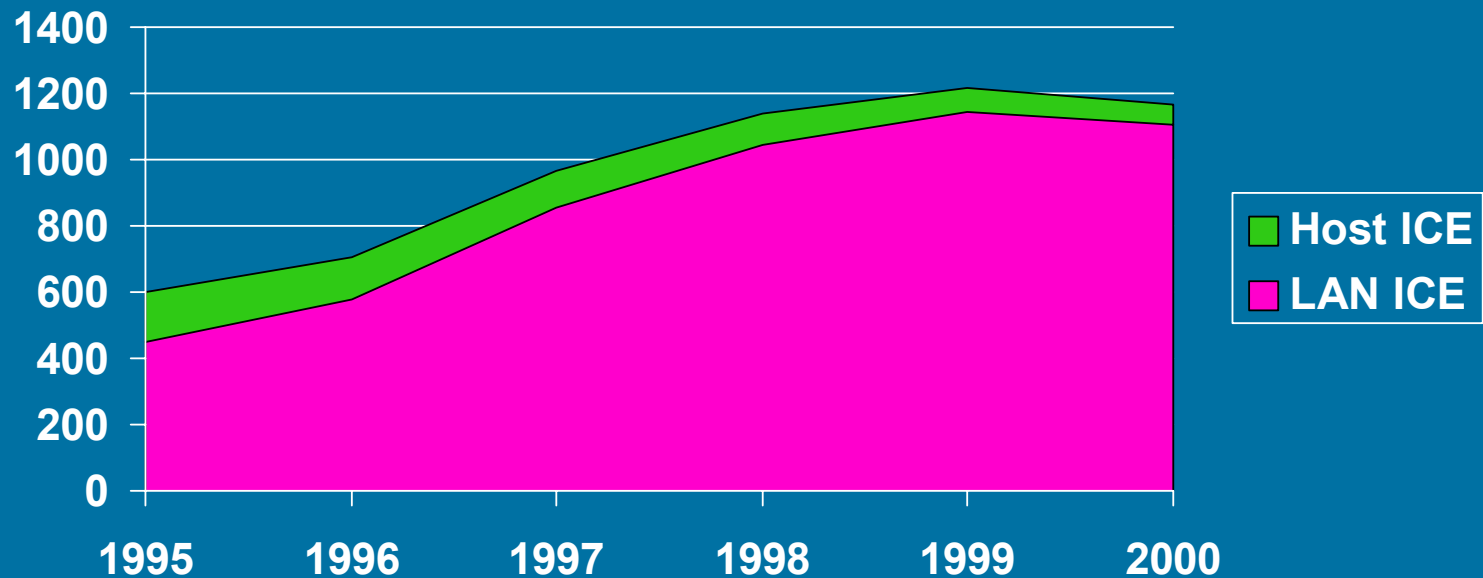






# ICE Revenue Growth

Total ICE Revenues 1995 - 2000 (\$M)





## ICE Drivers

- The migration of messaging to ICE products as the underlying infrastructure
- Recognition of human barriers
- Internet driving deployment within and outside the corporation
- Top four (Lotus/Microsoft/Netscape/Novell) squeezing second tier into niche areas.
- Competition driving ASP down and functionality up.



# Document Management

## Technology      Company Leading   Open   Strategy

*Open Text	A-	A-	A	- Leading and partnering w/others
*Documentum	A-	B+/A-	A-	- Strong strategy - the one to watch
*Novasoft	A	A+	A	- New company and direction!
PC DOCS	B+	B+	B+	- Strong player
IDI	B-	B-	C	- Greatest number of users
Uniplex	B	A-	C	- In evolution for EDM
Interleaf	B	B	C	- Re-inventing itself
Saros (Filenet)	C+	C+	C-	- Still in transition
Novell	B	A-	B-	- Softsolutions with GroupWise

\* potential expert panel partner





# Document Management Drivers

- Intranet bringing document management from specialized department to the masses.
- The web is made up of documents!
- EDM not trivial enough to be simply included with groupware - will remain as a distinct space.
- EDM and top four partnerships
- Traditional players (Documentum) may be caught on the wrong side of the ASP war.



# Workflow

	Technology Leading	Open	Company Strategy	
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*Keyflow	A	A	A	- Mid tier full functioned WF
Filenet	B	B	B	- Market leader in mid tier
*Jetform	A-	A	A-	- The key player in routing space
Banyan	C	C	F	- Number 2 in users in routing
Action	A	B+	A	
Reach	B+	B+	B	
Formtek	B	B	B	

\* potential expert panel partner



# Workflow Routing Drivers

- Workflow still the last area to be recognized
- Directory services key to the future
- Partnerships with ICE vendors
- Functionality being included with ICE/EDM
- A very hot area in 1998 - 2001
- Applications must be made easy to design/use



# Group Calendaring and Scheduling

	Technology Leading	Open	Company Strategy	
Microsoft	B+	B+	A	- Market leader
*Lotus/IBM	A	A	A	- Aggressive, strong growth but #2
*Franklin Quest	B-	B-	A	- Range from paper to electronic
Now Software	B	A-	B	- Great second tier solution
On Technology	B	B	B	---- Second tier ----
CS+T	A-	B	A-	
Campbell	A-	B	B	
Microsystems	A-	B+	B	
CE Software	A-	A-	A-	
Crosswind	B	B	B	

\* potential expert panel partner



## Group Cal. and Sched. Drivers

- Human factors delay implementation
- Seen as part of groupware but rarely implemented
- Often free -- ASP - \$5
- Second tier trying to find new areas to exploit
- Lackluster segment that will show moderate growth.





# Groupware Future

- Searching (adaptive)
- Knowledge management
- Tactical solutions
- Management at the manager level
- Vertical/industry focus
- Workflow



*Human factors are the key*

*If the employees won't use it,  
the ROI will be negative*



# Summary

- Groupware is the primary intranet application and will show very strong growth through 2001.
- Collaboration will become a common part of the work environment.
- Limited number of key expert panel partners - but -
- competition will drive innovation and the search for new technology.

